

January 10, 2022

Dear ICS members,

It is my great pleasure to announce that the winners of the 2021 ICS Prize for an Excellent Graduate Student are **Ran Attias** (Bar-Ilan University), **Subhash Garhwal** (Technion), **Qais Jaber** (Tel-Aviv University), **Efrat Shukrun-Farrell** (The Hebrew University of Jerusalem), **Ebaston Thankarajan** (Ariel University), **Ilia Tutunnikov** (Weizmann Institute of Science), and **Jonathan Tzadikov** (Ben-Gurion University of the Negev).

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Ilia Tutunnikov

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Jonathan Tzadikov

Ben-Gurion University

Ran Attias of Bar-Ilan University carries out his Ph.D. work under Prof. Doron Aurbach. He received his B.Sc. in biotechnology engineering in 2015 from Ben-Gurion University and M.Sc. in chemistry in 2017 from Bar-Ilan University. His work focuses on interfacial phenomena related to charge-transfer processes on the electrode-electrolyte solution interface during the intercalation process of magnesium ions into metal-oxide and metal-sulfide cathodes. Ran published over 20 research papers, 10 of which as the primary author.

Subhash Garhwal received his B.Sc. (Hons.) in chemistry (2015) from the University of Delhi and M.Sc. in organic chemistry from the Indian Institute of Science Education and Research, Bhopal (2018) with Dr. Joyanta Choudhury. His Ph.D. work at the Technion with Dr. Graham de Ruiter focuses on the design and synthesis of PCNHCP pincer complexes with first-row transition metals, such as iron and cobalt, to catalyze organic transformations, including hydrogen isotope exchange, alkene isomerization, alkyne hydrofunctionalization, and selective C-H activation of aryl ketones, esters, and amides.

Qais Jaber of Tel-Aviv University carries out his research in chemical biology under the supervision of Prof. Micha Fridman. He obtained his B.Sc. (2016) and M.Sc. (2018) in Chemistry from Tel-Aviv University with high distinction. His research focuses on developing new antifungal agents and novel molecular tools, such as live-cell fluorescent imaging as probes for deciphering the mode of action of fungal pathogens. He published his results in *Angewandte Chemie*, *ACS Chemical Biology*, *European Journal of Medicinal Chemistry*, *ACS Central Science*, *ChemBioChem*, and *Genetics*.

Efrat Shukrun-Farrell of the Hebrew University works under Prof. Shlomo Magdassi, focused on forming new photopolymerizable pre-ceramic compositions for 3D printing of hybrid and ceramic objects with high geometrical complexity and unique properties. She produced new materials for making organic-silica objects with high silica content, at centimeter to micron scale, to the first photochemical preparation of low-density ceramic aerogels, and the first 3D printing of ordered-mesoporous silica monoliths.

Ebaston Thankarajan of Ariel University has recently completed his Ph.D. degree under Professors Gary Gellerman and Leonid Patsenker. He has developed a series of fluorescently monitored targeted drug delivery systems, and activatable photosensitizers for photodynamic therapy of cancer and antimicrobial photodynamic therapy. The ISF supported this work. He continues this line and a new project funded by NOFAR, developing fluorescence-based tools for detecting and identifying pathogenic bacteria.

Ilia Tutunnikov of the Weizmann Institute received his B.Sc. in Chemistry from Tel Aviv University in 2016 and then started his Ph.D. direct track, supervised by Professors Ilya Averbukh and Yehiam Prior. His experimental work focuses on laser control of chiral molecules and echoes in single quantum systems. His theoretical work has led to the first experimental demonstration of the laser-controlled enantioselective orientation in a gaseous medium. He investigated the echo phenomenon in single vibrationally excited molecules and several other single quantum systems. The enantioselective orientation may pave the way to novel analytical and separation techniques. Ilia received the John F. Kennedy Award of the Weizmann Institute for his outstanding Ph.D. research.

Jonathan Tzadikov obtained all his degrees from Ben Gurion University, B.Sc. (2016), M.Sc. (2018 Cum Laude), and Ph.D. under Prof. Menny Shalom. He inserts heteroatoms into carbon networks to fine-tune their electronic, optical, electrochemical, and chemical reactivities. His unprecedented, scalable approach involves molten-state intermediate, using molten precursors, polycyclic aromatic hydrocarbons with various heteroatoms, such as elemental sulfur or ammonia-borane complex. The new materials show promising performance towards electrochemical oxygen evolution reaction (OER), Na-ion, and Li-ion batteries.

The ICS award ceremony will take place in the evening of February 22, 2022, during the 86th ICS Meeting.

Congratulations to Ran, Subhash, Qais, Efrat, Ebaston, Ilia, and Jonathan on their achievements!

Ehud Keinan